



18E ELECTRIC FAN HEATER

MODEL 18E-1 (Single Phase) MODEL 18E-3 (Three Phase)

PRODUCT MANUAL



IMPORTANT

READ AND UNDERSTAND THIS MANUAL BEFORE ASSEMBLING, STARTING OR SERVICING THE HEATER.
IMPROPER USE OF HEATER CAN CAUSE SERIOUS INJURY.
KEEP THIS MANUAL FOR FUTURE REFERENCE.

FOR PROFESSIONAL USE ONLY

OCTOBER 2014 REVISION

IMPORTANT INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING THIS HEATER

1. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Use handle when moving this heater. Keep combustible materials at least 6 feet (2 meter) from the front of the heater and keep them away from sides and rear
2. Extreme caution is necessary when the heater is used near children or invalids and whenever the heater is left unattended
3. Always unplug the heater when not in use
4. Do not operate any heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment or repair
5. Do not expose to rain, water spray or dripping water
6. This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate the heater where it may fall into a bathtub or other liquid container
7. Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or the like. Arrange cord away from traffic area and where it will not be tripped over
8. To disconnect heater, turn controls to off, then remove plug from outlet
9. Connect to properly grounded outlets only
10. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater
11. To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, where openings may become blocked
12. A heater has hot and arcing or sparking parts inside. Do not use in areas where gasoline, paint or flammable liquids are used or stored
13. Do not point to flammable materials
14. Use heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock or injury to persons
15. Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power tap (outlet/power strip)
16. **SAVE THESE INSTRUCTIONS**

GENERAL INFORMATION FOR USER

Patron electric heaters are designed for professional use.

The heat is generated in sealed heating elements inside the inner mantle of the heater. Heated air is then distributed by an electric motor driven fan blowing air through the heater.

Although effectively cooled by the fan, the heating elements have high surface temperatures. That is why combustible materials must be kept at a safe distance from the heater and care must be taken that no combustible particles enter the heater with the air sucked in by the fan.

Keep the heater clean of dust at any time. Dust may cause fire when heated.

Make sure that the fan blades may rotate unobstructed at all times.

Do not block air intakes or exhaust in any manner.

LIMITED WARRANTY

PATRON heater products are professional construction heaters. They are warranted for twenty-four (24) months from original date of purchase. The warranty does not cover products modified outside our factory, damage or failure caused by acts of God, abuse, misuse, use on other than rated voltage, abnormal usage, faulty or improper installation, failure to provide recommended maintenance or any repairs other than those provided by an authorized PATRON service.

THERE ARE NO OBLIGATIONS OR LIABILITIES ON THE PART OF PATRON PRODUCTS INC. FOR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE PRODUCT OR OTHER INDIRECT DAMAGES WITH RESPECT TO LOSS OF PROPERTY, REVENUES, OR PROFIT, OR COST OF REMOVAL, INSTALLATION OR REINSTALLATION.

THIS WARRANTY CONSTITUTES THE EXCLUSIVE REMEDY OF ANY PURCHASER OF EQUIPMENT SOLD BY THE MANUFACTURER AND ITS DEALERS AND DISTRIBUTORS AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

During the warranty period, Patron Products will, at its sole option, repair or replace any defective parts or products returned, freight prepaid, to Patron Products or such other location as Patron Products may designate.

Returned products must be packaged carefully, and Patron Products shall not be responsible for damage in transit. When returning parts, the owner must provide the model number of the product and the nature of difficulty being experienced. This warranty does not oblige Patron Products to bear the cost of labour in replacing any assembly, unit or component or part thereof, nor does the company assume any liability for secondary charges, expenses of removal or installing, freight or damages. There will be charges rendered for product repair after our warranty period has expired. Proof of purchase, including date, must accompany request for in-warranty service.

OPERATION

REVIEW AND UNDERSTAND ALL WARNINGS IN THIS MANUAL. THEY ARE ESSENTIAL FOR SAFE USE OF THE HEATER.

FOLLOW ALL LOCAL CODES

TO START HEATING:

1. Place the heater on a stable and level surface. Make sure that no explosive or combustible fumes or dust are present.

MINIMUM CLEARANCES FROM COMBUSTABLE MATERIALS	
OUTLET = 6 feet	SIDES = 1 foot
TOP = 2 feet	REAR = 2 feet
FLOOR = COMBUSTABLE	

2. Connect power cord of heater into 240 V / 60 Hz power source. THE POWER SOURCE MUST BE EQUIPPED WITH A CIRCUIT BREAKER! See paragraph "Technical specifications" in this manual for correct amperage rating. NOTE: Check your heater to make sure it is wired for either one or three phase use.
3. Set the room thermostat to a temperature above the ambient room temperature by turning the knob. Note! The heater will start heating only if the thermostat "calls for heat" meaning that it is set to higher than prevailing ambient temperature
4. Turn the main switch into position 2 = "Output 13,000 W" for partial heating output or into position 3 = "Output 19,000 W" for full heating output. THE HEATER WILL NOW OPERATE AUTOMATICALLY, CONTROLLED BY THE THERMOSTATS.
5. When no heating is needed, turn the main switch into position 1 = "Ventilation only" for air circulating purposes.

TO STOP HEATING

1. Turn the main switch into position "0" standby
2. Let the fan cooldown heater for 2-3 minutes
3. Disconnect the power supply plug

NOTE!

THE HEATER IS EQUIPPED WITH AN OVERHEAT LIMIT SWITCH WHICH MAY CAUSE THE HEATER TO STOP. CHECK AND REMOVE THE CAUSE FOR OVERHEATING BEFORE RESTARTING.

MAINTENANCE

WARNING!

NEVER SERVICE THE HEATER WHILE IT IS PLUGGED IN, RUNNING OR HOT. SEVERE BODILY INJURE OR ELECTRIC SHOCK MAY OCCUR.

ONLY QUALIFIED PERSONS ARE ALLOWED TO OPEN HEATER FOR SERVICE. NO USER-SERVICEABLE PARTS INSIDE.

- Keep heater clean. Use pressurized air to blow fan blades clean. Note! Use moderate pressure to avoid damage to fan blades
- Inspect heater before and after each use
- The fan motor is sealed and has permanently lubricated bearings

STORAGE

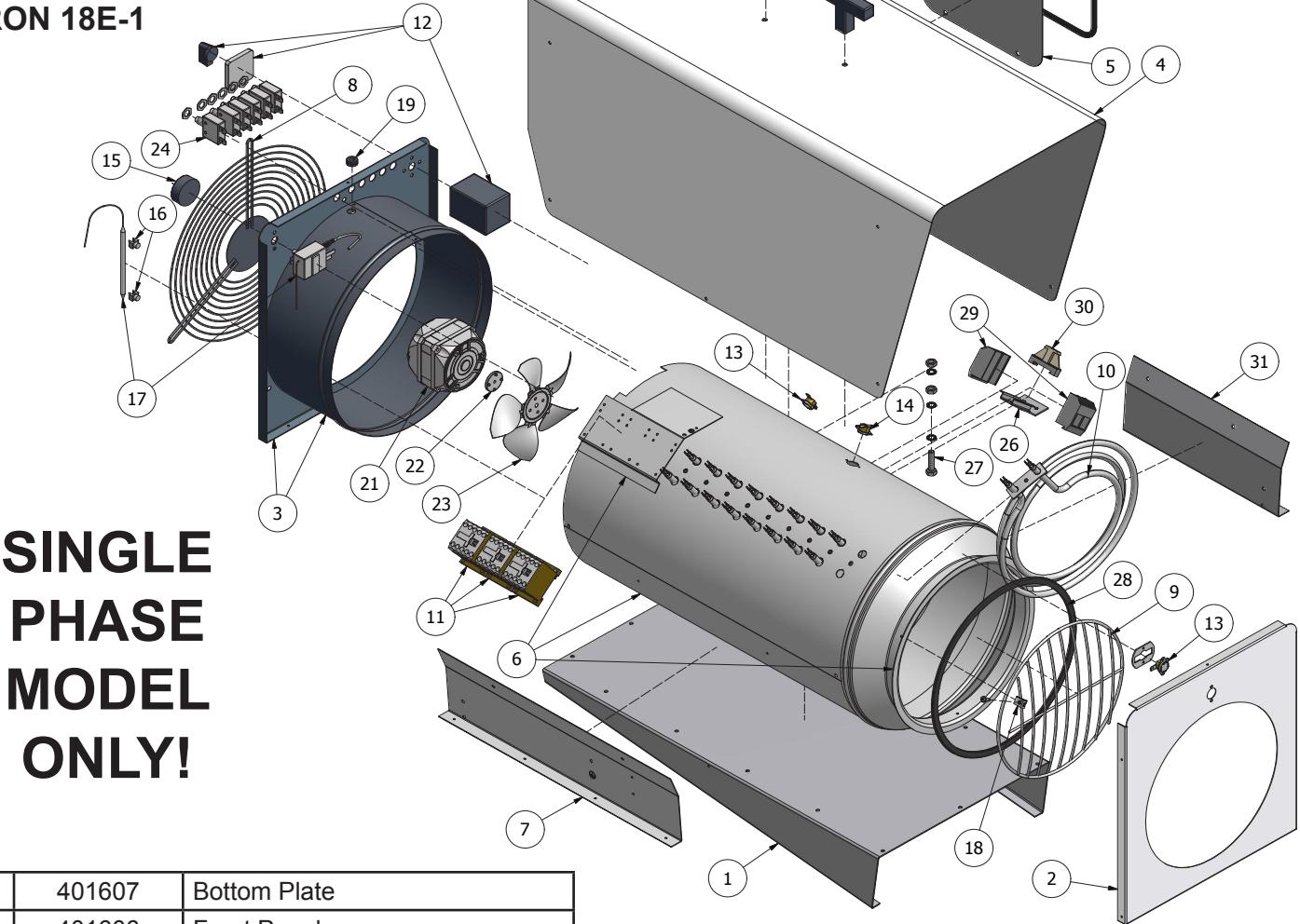
When not in use, the heater must be disconnected from power source, cleaned of dust and stored in a dry place.

The power supply cord should be loosely wound around the handle of the heater.

TECHNICAL SPECIFICATIONS

HEAT OUTPUT (2 STAGE SELECTOR)	BTU/Hr	65,000 or 45,000 19,000 or 13,000
AIRFLOW	CFM	590 or 1000
ELECTRIC CONNECTION	V ac / Hz	240 / 60 single phase or 3 phase
AMPERAGE DRAW (3 Phase)	A	Full: 47 Partial: 31
AMPERAGE DRAW (1 Phase)	A	Full: 81 Partial: 54
AMBIENT THERMOSTAT	temp. range	32 - 100 °F (0 - 40 °C)
LENGTH	inches	32.0
WIDTH	inches	14.0
HEIGHT	inches	20.0
WEIGHT	lbs	62.0

SPARE PARTS DIAGRAM PATRON 18E-1

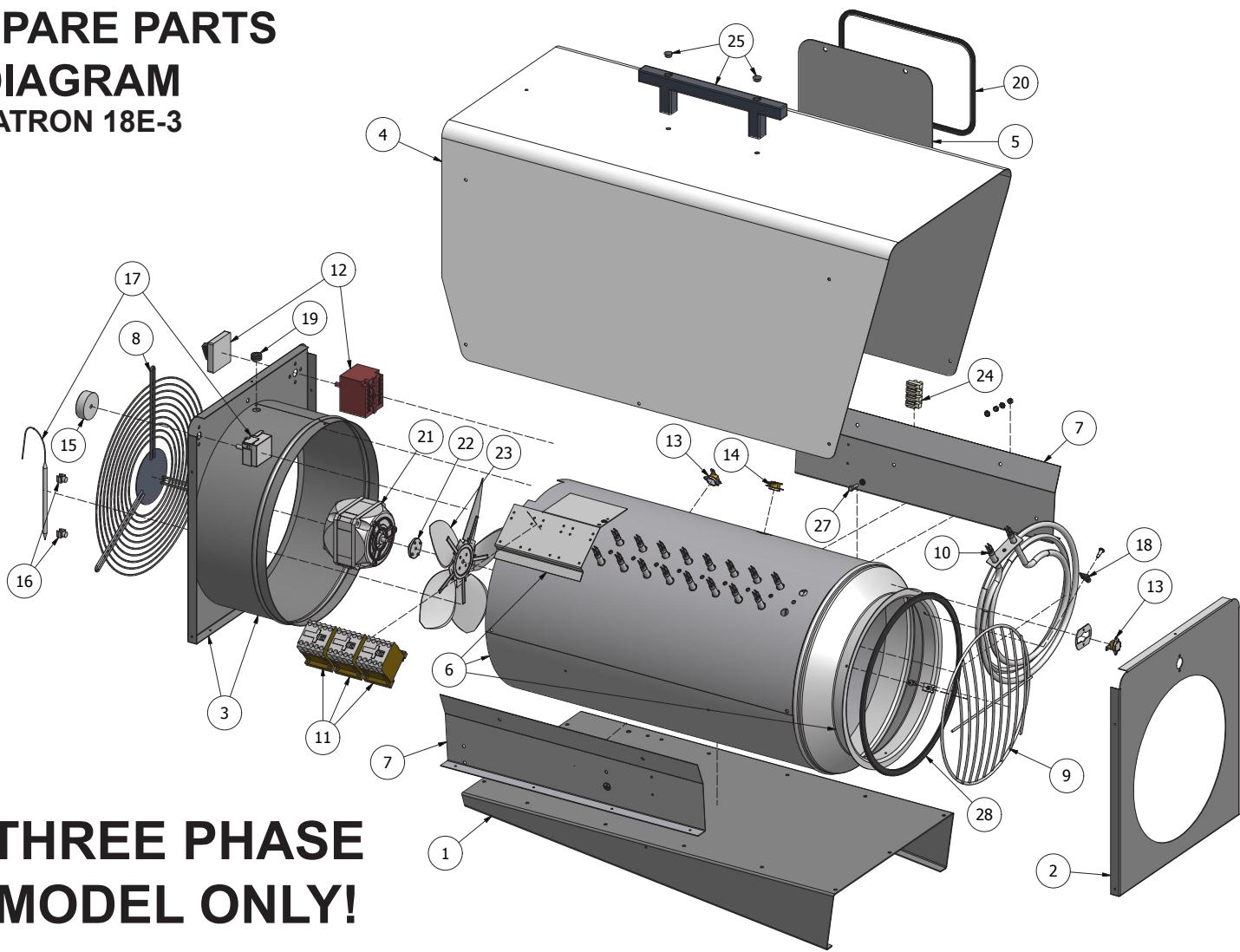


**SINGLE
PHASE
MODEL
ONLY!**

1	401607	Bottom Plate
2	401606	Front Panel
3	401615	Rear Panel
4	401632	Hood
5	401605	Connection Hatch
6	401603	Inner Mantle (incl. Air Cone)
7	401609	Bracket
8	83920	Rear Grill
9	83200	Front Grill
10	42320	Heating Element (9/Heater)
11	22663	Contactor (3/Heater)
12	26605	Main Switch Asembly
13	21200	Overheat Limit Switch
14	21100	Cooldown Thermostat
15	20212	Thermostat Knob
16	37910	Plastic Bracket
17	20210	Ambient Thermostat

18	82760	Plate Nut
19	36809	Guard Ring
20	401604	Gasket for Connection Hatch
21	14201	Fan Motor
22	17907	Fan Hub
23	16410	Fan Blade
24	38500	Circuit Protector
25	80100	Handle
26	402214	Bracket for Terminal Block
27	402211	Grounding Lug
28	401604	Gasket
29	36615	Terminal Block (18E-1)
30	36616	Locking Clamp
31	402213	Bracket for Inner Mantle

SPARE PARTS DIAGRAM PATRON 18E-3

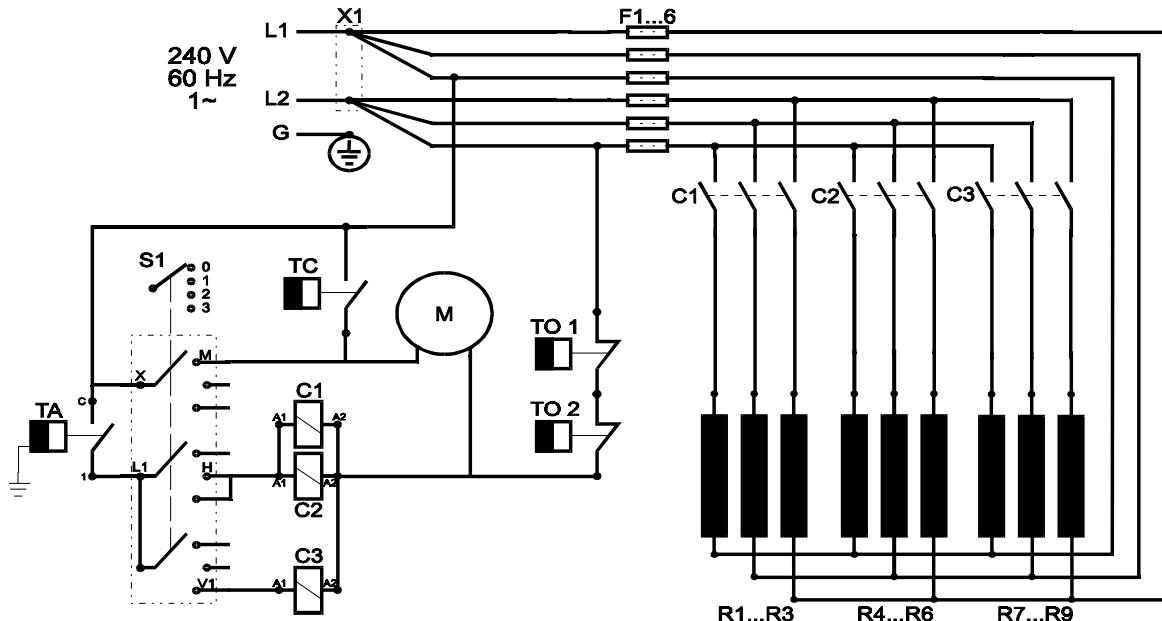


**THREE PHASE
MODEL ONLY!**

1	401607	Bottom Plate
2	401606	Front Panel
3	401615	Rear Panel
4	401632	Hood
5	401605	Connection Hatch
6	401603	Inner Mantle (incl. Air Cone)
7	401609	Bracket
8	83920	Rear Grill
9	83200	Front Grill
10	42320	Heating Element (9/Heater)
11	22663	Contactor (3/Heater)
12	26605	Main Switch Assembly
13	21200	Overheat Limit Switch
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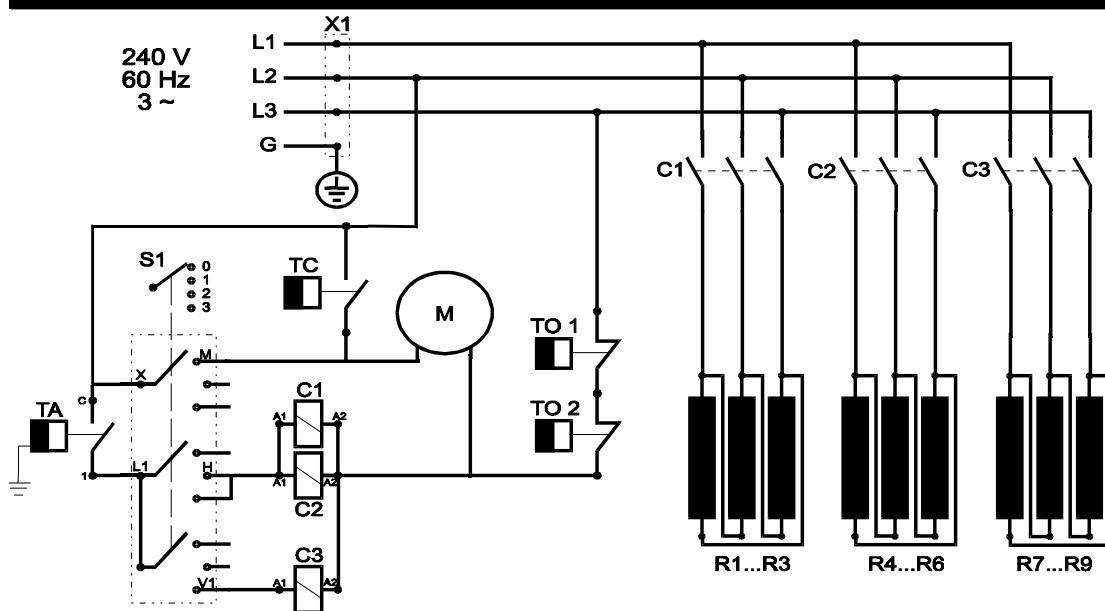
15	20212	Thermostat Knob
16	37910	Plastic Bracket
17	20210	Ambient Thermostat
18	82760	Plate Nut
19	36809	Guard Ring
20	401604	Gasket for Connection Hatch
21	14201	Fan Motor
22	17907	Fan Hub
23	16410	Fan Blade
24	36704	Terminal Block (18E-3)
25	80100	Handle
27	401613	Grounding Lug
28	401604	Gasket

WIRING DIAGRAM



**SINGLE
PHASE MODEL
ONLY!**

C1 ... C3	Contactors & Coils	22663
F1 ... 6	Circuit Protectors	38500
M	Fan Motor	14201
R1 ... R9	Heating Elements	42320
S1	Main Switch	26605
TA	Ambient Thermostat	20210
TC	Cooldown Thermostat	21100
TO 1	Overheat Limit Switch (inner)	21200
TO 2	Overheat Limit Switch (discharge)	21200
X1	Terminal Block	36615



**THREE PHASE
MODEL ONLY!**

C1 ... C3	Contactors & Coils	22663
M	Fan Motor	14201
R1 ... R9	Heating Elements	42320
S1	Main Switch	26605
TA	Ambient Thermostat	20210
TC	Cooldown Thermostat	21100
TO 1	Overheat Limit Switch (inner)	21200
TO 2	Overheat Limit Switch (discharge)	21200
X1	Terminal Block	36704

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